REMARKS

Claims 1-22 are currently pending in the application. By this amendment, claims 1, 5, 14, 18, 20, 21 and 22 are amended for the Examiner's consideration. The foregoing separate sheets marked as "Listing of Claims" shows all the claims in the application, with an indication of the current status of each

The Examiner has objection to the specification, and made a §112, first paragraph rejection, on the ground that the specification does not support Viewer controls of the data transmission "without intervention" by the Mediator node. This is incorrect. Figure 3 clearly shows the time line of the communications handled by the invention. In particular, it is clear in the Figure that the Mediator node no longer plays a role after the encrypted tokens are sent to the MediaSender and the Viewer. There exists direct communication between the MediaSender and the Viewer after this point in the communications timeline, after the keys are sent 40. This is the last involvement of the Mediator node. At this point, "both MediaSender and Viewer are ready to talk to each other" (page 17, line 23) and "[t]he Mediator Node 13 is now out of the direct communication process" (emphasis supplied; page 17, line 22). Communication is then established (41,42), and the Viewer opens a control socket 43 to the MediaSender. See also attached Declaration of inventor Bartley C. Conrath, ¶5

It should be noted that the Mediator node is not involved again until after communication between the MediaSender and Viewer has ended and both the MediaSender and Viewer have sent a status token to the Mediator Node (page 18, lines 6-8). Thus it is clear that the Mediator Node plays no role whatsoever from a point in time before communication is established between MediaSender and Viewer

until after communication is ended. Consequently, there is ample support in the specification for the claim language "without intervention by the Mediator node", and it is respectfully submitted that the Examiner's objection to the specification and §112 rejection are overcome.

The claims have been amended to clarify that "without intervention" follows sending of the keys, but it should be noted that – having received the keys – all further communication (including the establishment of the communications link) is accomplished by and between the MediaSender and Viewer. It is respectfully requested that the objection and §112 rejection be withdrawn.

The Examiner has objected to the syntactical error "direction transmission" in claim 1, which has been overcome by the foregoing amendment, the offending error having been removed.

The Examiner has rejected claims 1-22 under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. This amendment overcomes this ground of rejection. See the above discussion.

The Examiner has rejected claims 1-8, 11-21 under 35 U.S.C. §102(a) and (e) as being anticipated by U.S. Patent No. 5,930,473 to Teng et al. ("Teng").

Before proceeding further it will help to address the Examiner's response to the applicant's arguments. Quoting from paragraph 2 of the Examiner's response:

> "Applicant argues that Teng does not disclose a Viewer managed system where the Viewer controls the connection by pausing and restarting the video stream at the Sender, and that Teng instead discloses that intervention by the Mediator note is required. However, the Examiner believes that Teng does indeed disclose a system where the Viewer controls the connection by pausing and restarting the video stream (column 10, lines 36-39, where the video services interface software is on the client)."

The passage cited from Teng is the underlined portion of the following paragraph:

> FIGS. 5A and 5B illustrate the software executed by the CPU 91 in the client 14-1 of FIG. 4. As shown in FIG. 5A the client software includes video applications and video player software 100 such as Microsoft MCI.TM. Media player. The digital video control system 102 manages video objects to provide a user interface to manipulate and/or view one or more movies. The digital video control system may for example be Microsoft Video for Windows.TM. or QuickTime.TM.. The client software also includes an operating system 104 such as DOS or UNIX. In addition, the client executes video service interface software 106 **which permits the client to access digital video from the dedicated video server** 12 across the LAN segment 13 (see FIG. 1). This software provides a set of movie and stream control functions which can be called by the user. The video services interface software 106 translates the function calls into remote procedure calls. Typical video function which can be called by the video services interface software includes movie manipulation routines like open/close, play/stop/record, read/write. A typical stream function is connect/disconnect.

It will be observed from the context, and in particular the portion indicated in **bold** above, that this reference concerns client functionality executed via the video server. This point is emphasized by the explicit statement "[t]he RPCs are transmitted ... across the LAN segment ... to the server" (col. 10, lines 59-61), and again in connection with the discussion of Figure 6 (col. 11, line 64, to col. 12, line 3) where it is clear that control functions are mediated by the video server. It cannot be disputed that Teng's control structure requires intervention of the server. Therefore, the passage cited by the Examiner is inapposite and has nothing to do with the direct control of the Sender by the Viewer, as described and claimed in the present invention.

It should also be noted that the above paragraph in Teng (and the one following, as well as drawing figures 5A and 5B) are taken nearly verbatim from the parent application U.S. Patent No. 5,550,982 to Long et al. ("Long"), from which

Teng is a continuation-in–part. The same may be said for the discussion of Figures 3A and 3B (col. 8, line 40, to col. 9, line 60). Long discloses a video application server system where the video streams are run through the server, in a manner similar to the prior art model of "Linear Three Node Architecture" as described in the specification at page 2, lines 11-12, and page 3, line 17, to page 4, line 2. It is clear in Long that video transmissions (as well as control functions) are via the server. While Teng is not entirely clear about the video stream, there is no disclosure in Teng inconsistent with the use of the video server for transmissions between presenter and viewer. Indeed, Teng maintains the server concept of Long even while allowing for distribution of "video server features ... across multiple server units and/or across one or more clients" (col. 9, lines 61-64). Thus the evident intention of Teng to expand the disclosure of Long to allow a more flexible distribution of server functionality to "one or more clients" may account for the softening of Teng's language with regard to use of the video server, as such, to handle the video stream. While it is possible to speculate that Teng discloses direct video transmission between a presenter and a client (as opposed to video server functionality being distributed to clients), the possibility of such speculation lends itself to improper reasoning by hindsight. It is not at all clear that Teng discloses transmission of streaming video from a presenter to a viewer separate from and without intervention by a video server or resources performing video server functions under control of a video server. See the attached Declaration of the inventor, Bartley C. Conrath, at ¶¶6,7,13,14 regarding the role of Teng's video server in transmission of video streams. It is just such a direct

transmission from Sender to Viewer without intervention by a video server that is disclosed and claimed in the present invention.

In any event, however, Teng is very clear that the video server handles the control functions. The RPC control functions as disclosed in Teng are via the video server, which makes the Teng reference inapplicable to the Viewer control structure of the present invention. The present amendment to the claims clarifies and emphasizes this distinction. It should be observed that a consequence of having a separate communications channel for each Viewer is that the control by the Viewer over the Sender video stream in the present invention is extensive, as indicated at page 23, lines 6-14, which supports the current amendment to claim 22.

Teng provides for data streaming between clients across a TCP/IP network (col. 3, lines 4-9). Teng's approach is responsive to the high bandwidth requirements of streaming video signals (col. 2, line 64, to col. 3, line 34), and in particular the need to guarantee the bandwidth required for each video signal (col. 3, lines 23-25) and to prevent additional requests from overloading the system (col. 3, lines 29-30). Consequently, the data streaming is regulated and controlled by a server (col. 3, lines 54-58). For example, a source client may authorize a viewer client to broadcast a video stream (col. 4, ,lines 15-18), but this authorization and its revocation are handled via requests to the server (col. 4, lines 18-29).

By contrast, the present invention is responsive to site monitoring needs of a customer. For example, a customer may want to monitor her child under the care of a babysitter at the customer's home, using a webcam connected to a home computer at the home. Using a remote computer, the customer logs on to the web site of the

Mediator node, which then authorizes a direct connection between the customer's home computer (the Sender node) and the remote computer (the Viewer node), which connection is established directly by the Sender and the Viewer (see Figure 3, items 41-44). But once the connection is established, control of the connection rests with the Viewer, who initiates, stops and restarts the transmission of streaming data from the Sender (page 7, line 24). Consequently, the present invention provides for the Viewer to control the connection. No intervention of the Mediator node is required, as in Teng. Teng fails to disclose or suggest a Viewer managed system as described in the present invention.

The different purposes of the present invention and Teng should be noted. One advantage of the Viewer managed architecture is less load on the Mediator node. Even though the Mediator node is not a video server (as in Teng), the burden of administrative control is reduced by Viewer control of the streaming. Another advantage – of no significance for Teng – is security, since the Mediator node does not know anything about the data being sent or about the controls invoked by the Viewer. After sending the session keys that enable direct transmission to be established, the Mediator node has no interest in the transmission. The next knowledge that the Mediator node acquires about the session is a status notice from the Sender and Viewer sent after the session has been terminated (page 18, lines 6-8).

In contrast, Teng is concerned with managing network bandwidth in order to handle distribution of streaming video from presenters to viewers, where there is often a high ratio of viewers to presenters and multicast transmission is economical. Teng provides a video server to serve streaming video over the network, and to

control use of bandwidth on the network. The server also controls quality of broadcast video. The present invention has no need for a video server, and provides a unicast (point-to-point) service where each Viewer is in control of its own separate video stream. Where Teng implements a multicast environment, separate video streams for each viewer would consume enormous bandwidth. Thus, in terms of the present invention, Teng sacrifices Viewer control for bandwidth control. It is therefore not surprising that Teng does not disclose or suggest the Viewer managed data streaming described and claimed in the present invention. Further, the invention's monitoring function can be accomplished with lower frame rates (page 20, line 27) than would be acceptable in Teng's live video broadcast to a large audience. The Mediator node simply doesn't care about the quality, amount or any other aspects of the streaming data transmission. Consequently, in the present invention, there is no role (control or otherwise) for the Mediator node during transmission. It is the Viewer that controls the transmission, and this is done without any intervention (or interest, for that matter) from the Mediator node.

For the foregoing reasons, in view of the above amendments to the claims which emphasize the Viewer control features of the invention, it is submitted that the Teng reference is overcome.

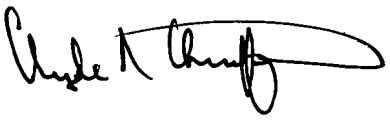
The Examiner has rejected claims 9, 10 and 22 under 35 U.S.C. §103(a) as being unpatentable over Teng in view of U.S. Patent No. 6,223,292 to Dean et al. ("Dean"). Applicant acknowledges that Dean teaches a token based approach to security. However, since these claims are dependent upon claims now believed to be allowable, this ground of rejection is believed to be moot.

In view of the foregoing, it is requested that the application be reconsidered, that claims 1-22 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at 703-787-9400 (fax: 703-787-7557; email: clyde@wcc-ip.com) to discuss any other changes deemed necessary in a telephonic or personal interview.

Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



Clyde R Christofferson
Reg. No. 34,138

Whitham, Curtis, Christofferson & Cook, P.C. **Customer No. 30743**
11491 Sunset Hills Road, Suite 340
Reston, VA 20190
703-787-9400
703-787-7557 (fax)